

IZBYLYKOV, D.A.

Using longitudinal partitions in the last chambers of mills.
TSement 28 no.3:21 My-Je '62. (MIRA 15:7)

1. Yemanzhelinskiy tsementnyy zavod.
(Milling machinery)
(Cement plants—Equipment and supplies)

ROMANOWSKI, Henryk; IZDEBSKA, Kazimiera; PRZEZDZIEK, Zofia

Hydrazine sulphate and hydroxylamine hydrochloride as specific agent for the detection of mercury and silver in toxicological analysis of chromatographic paper method. Farmacja Pol 16 no.21: 452-454 N '61.

1. Zaklad Chemii Toksykologicznej i Sadowej, Akademia Medyczna, Lublin.

ZABLOCKI, Bernard; GROMSKA, Wiesława; IZDEBSKA, Krystyna

Further research on substances isolated from plant and animal tissues reacting not specifically in precipitation tests with antibacterial sera. Nauki matemat. przyrod. Łódź no.12:9-19 '62.

1. Katedra Mikrobiologii Szczegółowej, Uniwersytet, Łódź.

*

IZDERSKA, Krystyna

Thermolabile proteins (Neurotoxins) from *Proteus mirabilis*
and its stable L forms. Acta microbiol. Pol. 14 no.1:41-54
'65.

1. From the Department of General Microbiology of Lodz Univer-
sity, Lodz.

IZPEBSKA, Krystyna; GUBANSKI, Marian

Studies on the antibacterial properties of natural honey.
Nauki matem przyrod Lodz no.12:21-26 '62.

1. Katedra Fizjologii Roslin, Uniwersytet, Lodz.

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1. The first of these is the

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IZDEBSKA, Mirosława

A contribution to the study of orchids in the forests of the Kosobudy District, with special consideration of the vegetation of natural reserve (of *Cypripedium calceolus* L.). An. univ. Lublin sec.D 15:421-43? '60.

1. Zakład Botaniki Farmaceutycznej Wydziału Farmaceutycznego Akademii Medycznej w Lublinie Kierownik: z prof. dr Tadeusz Szynal.
(PLANTS)

IZDEBSKAYA, G.A. [Izdebs'ka, H.A.]; KIL'CHEVSKIY, N.A. [Kil'chevs'kiy, N.O.]

Convergence of the collocation method and optimal selection of the collocation points as applied to the integrodifferential equations of equilibrium in the theory of plates. Dop. AN URSR no.4:469-472 '64. (MIRA 17:5)

1. Institut mekhaniki AN UkrSSR i Kiyevskiy politekhnicheskij institut. 2. Chlen-korrespondent AN UkrSSR (for Kil'chevskiy).

IZDEBSKA-MAKOSA, Zuzanna; KLOTT, Maria; ROWINSKA, Ewa; KLIMCZAK, Maria;
KOZIOROWSKI, Antoni

Diagnostic difficulties in the pulmonary fibrosis. Gruzlica
33 no.7:605-613 J1 '65.

1. Z Kliniki Chorob Pluc (Kierownik: doc. dr. P. Krakowka),
z Zakladu Radiologii (Kierownik: prof. dr. K. Ossowska) i z
Zakladu Fizjopatologii (Kierownik: dr. A. Koziorowski)
Instytutu Gruzlicy.

L 8775-65 EM ASD(f)
ACCESSION NR: AP4045898

S/0021/04/000/009/1154/1158

AUTHOR: Izdebs'ka, G. A. (Izdebskaya, G. A.)
AN UkrSSR

6

TITLE: Thickness-variation effect of a rectangular plate on the natural frequency of its transverse vibration

SOURCE: AN UkrRSR. Dopovidi, no. 9, 1964, 1154-1158

TOPIC TAGS: variable thickness plate, constant thickness plate, transverse vibration, flexural vibration, plate vibration

ABSTRACT: The influence of thickness variation of a rectangular plate (as a function of its middle-surface point location) on the basic frequency of its flexural vibrations is qualitatively examined. By applying the mean-value theorem for integrals to the equations for the frequency of free flexural vibrations of a variable-thickness plate (VTH) and those of a constant-thickness plate (TH), it is proved that the frequency spectrum of the free flexural vibrations of a VTH coincides with that of a certain TH. In equation form

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L 8775-65

ACCESSION NR: AP4045898

lishing the relationship between a VThP and a CThP (having the same frequency spectra) with respect to their geometrical and physical parameters is derived. By using this equation, the spectrum of frequencies of a VThP can be determined by taking the frequency spectrum of the corresponding CThP. The data on the latter can be found, for certain boundary conditions, in a vibration handbook. This equation can be also used for approximate modeling of the free flexural vibrations of a VThP by means of a CThP. Orig. art. has: 14 formulas.

ASSOCIATION: Ky*yivsky*y politekhnichny*y insty*tut (Kiev Polytechnic Institute)

SUBMITTED: 02Dec63

ATD PRESS: 3111

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OTHER: 000

Crd 2/2

L 33970-65 EWT(m)/EWT(n)/EPR EM

ACCESSION NR: AP5007269

1/0190/1/1/001/002/0062/0066

AUTHOR: Izdebskaya, G. A. (Kiev)

TITLE: Investigating the stability of a rectangular plate with variable thickness

SOURCE: Prikladnaya mekhanika, v. 1, no. 2, 1965, 42-66

Green function, shear stress, compression str. μ

ABSTRACT: An approximate method was used to determine the magnitude of critical stress in a rectangular plate under compression with a variable thickness along one

$$T_{11} = \frac{1}{2} \left(T_{11}^0 + T_{11}^1 \right) + \frac{1}{2} \left(T_{11}^2 + T_{11}^3 \right) + \dots$$

The solution is then generalized to the case of variable applied stress. The

WARESKA, Wanda, KLOTT, Maria; IZDEBSKA-MAKOSA, Zuzanna

Excretion of cycloserine in cases of kidney diseases. Gruz-
lica 31 no.6:664-668 Je'63

1. Instytut Gruzlicy, Warszawa.

7

BEDNARSKI, Zbigniew; KRASUCKI, Henryk; IZDEBSKA-MAKOSA, Zdzisława

Surgical treatment of a spontaneous lymphatic spilling into the pleural cavity. Gruzlica 32 no.9:831-835 S '64

1. Z Kliniki chirurgicznej (Kierownik: prof. dr.med.L.Manteuggel)
i z Kliniki Chorob Płuc (Kierownik: doc. dr. med. P.Krakowka)
Instytutu Gruźlicy.

INDEX: KAYA, G.A. (Kiyev)

Investigating the stability of a rectangular plate of variable thickness. Prikl. mekh. 1 no.2:62-66 '65.

(MIRA 18:6)

1. Kiyevskiy politekhnicheskoy institut.

POLAND / Organic Chemistry. Synthesis.

G-2

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23426

Author : Bibiecki, S.; Haase, A.; Izdebski, J.; Kesler, E.; Rylski, L.

Inst : Academy of Sciences of Poland

Title : Some Phthalazine and Pyridazine Derivatives as Potential Hypotensive Agents.

Orig Pub: Bull. Acad. polon. sci. Ser. sci. chim., geol. et geogr., 1958, 6, No 4, 227-233.

Abstract: A preliminary report on the research for new hypotensive agents close to 1-hydrazinophthalazine (I) and 1,4-dihydrazinophthalazine (II). Hydrochloride of N-carbethoxy-N'-phthalazinomethylamine, melt. p. 212° (dissoc.), was obtained from I and ClCOOC₂H₅. That hydrochloride, preserving the hypotensive properties of I, is 4 times less toxic

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G-13

POLAND / Organic Chemistry. Synthesis.

Abs Jour: Ref Zhur-Khimiya, No 7, 1959, 23426

Abstract: than the latter. Hydrochloride of 1,4-bis-(carboethoxy-hydrazino)-phthalazine, melt. p. 207° (dissoc.), synthesized from II in an analogous way, is deprived of hypotensive properties. 3-(pyridyl-3')-symm-triazolo-[b]-phthalazine, melt. p. 215-216°, and 3-(pyridyl-4')-symm-triazolo-[b]-phthalazine, melt. p. 253-254°, are formed by the interaction of I with hydrochlorides of nicotinic (III) and isonicotinic acids respectively in pyridine. A similar condensation of 3-hydrazino-6-phenylpyridazine, melt. p. 145-145° with III and IV results in 3-(pyridyl-3')-6-phenyl-symm-triazolo-[b]-pyridazine, melt. p. 188-189°, and 3-(pyridyl-4')-6-phenyl-symm-triazolo-[b]-pyridazine, melt. p. 306-307°, respectively. The synthesis of hydrochlorides of

Card 2/3

BINIECKI, Stanislaw; IZDEBSKI, Jozef; ROZALSKA, Irma

Synthesis of some β -diethylaminoethylamino- and of some carbethoxyamino derivatives of isoquinoline. Acta pol. pharm. 19 no.5:437-441 '62.

1. Z Zakladu Nowych Lekow Instytutu Lekow w Warszawie.
(QUINOLINES) (CHEMISTRY, PHARMACEUTICAL)

IZDEESKI. K.

Trees and shrubs of the yew-tree reservation in Wierzhias and the biological structure of the trees p. 5.
(BIOLOGIA, Vol. 15, No. 1, 1956, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9. Sept. 1957 Uncl.

IZDEBSKI, K.

Projected steppe reservation in Katy near Zamosc.

p. 21 (Chronomy Przyrode Ojczysta. Vol. 13, no. 5, Sept/Oct. 1957. Krakow, Poland)

Monthly Index of East European Accessions (MEI) LC. vol. 7, no. 2,
February 1958

IZDEBSKI, K.

Forest communities of the central part of Roztocze. Acta soc
botan Pol 32 no.2:349-374 '63.

1. Zakład Systematyki i Geografii Roslin, Uniwersytet im. Marii
Gurie Skłodowskiej, Lublin.

IZDEBSKI, Kazimierz; DONIEC, Jerzy

Combating accidents causing damages to the palm, fingers, and
wrist. Wiadom gorn 12 no.6:193-198 Je '61.

IZDEBSKI, Kazimierz, mgr inz.

More on injuries of the palm, fingers, and carpus. Wiadom
gorn 13 m.9:316-320 S '62.

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WITORZENC, Julian; IZDEBSKI, Marian.

Case of porphyria. Polski tygod. lek. 10 no.44:1436-1438 31 Oct 55.

1. Z II Kliniki Chorob Wewnętrznych A.M. w Łodzi; kierownik: prof.
dr. med. J.Jakubowski. Łódź, II Kl. Chor. Wewn. A.M.
(PORPHYRIA, case reports)

IZDEBSKI, Marian; WISLAWSKA, Barbara

A case of parathyroid adenoma with signs of Recklinghausen's disease and severe anemia. Pol. tyg. lek. 17 no.5:182-184 29 Ja '62.

1. Z II Kliniki Chorob Wewnętrznych AM w Łodzi; kierownik: prof. dr med. Jerzy Jakobowski.
(OSTEITIS FIBROSA compl) (ANEMIA HYPOCHROMIC etiol)

IZDEBSKI, Marian; WISLAWSKA, Barbara

Acute allergic toxic syndrome following meprobamate (miltown). Pol.
tyg. lek. 17 no.10:363-364 5 Mr '62.

1. Z II Kliniki Chorob Wewnętrznych AM w Łodzi, kierownik: prof. dr
nauk med. Jerzy Jakubowski.

(MEPROBAMATE toxicol) (ALLERGY)

SZYKIER, Leon; IZDEBSKI, Marian; KULESZA, Wojciech

Results of the treatment of rheumatoid arthritis with gold salts
according to observations on 656 patients. Pol. tyg. lek. 22 no.23:
912-914 4 Je '62.

1. Z Wojewodzkiej Przychodni Reumatologicznej w Lodzi; dyrektor:
dr med. Leon Szykier.

(ARTHRITIS RHEUMATOID ther)

POLAND

JANCZUK, Zbigniew, JEDRZEJEWSKA, Teresa, ~~SOBOTKOWSKI, Kasia~~
miera, and ~~IZDUBSKI, Marian~~, Department of Preventive Sto-
matology (Zaklad Stomatologii Zachowawczej) (Director: Prof.
Dr. Mieczyslaw FUCHS), the Department of Radiology (Zaklad
Radiologii) ("Kurator": Docent, Dr. Ludwik MAKURSKI), and
the Second Clinic of Internal Diseases (II Klinika Chorob
Wewnętrznych) (Director: Prof. Dr. Jerzy JAKUBOWSKI), all
of the AM [Akademia Medyczna, Medical Academy] in Lodz.

"On the Treatment of Sjögren Syndrome. Clinical Observa-
tions."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 3, 14 Jan 63,
pp 100-104.

Abstract: [Authors' English summary modified] Three cases,
with fully developed Sjögren syndrome involving the eyes,
mucosa and joints, as well as the parotid gland, are de-
scribed. Hormone, vitamin, tonic, and other standard
treatment was of no avail, and no way was found to alleviate
the patients. Of the 27 references, 7 each are Western and
German, and 13 are Eastern Bloc.
1/1

POLAND

DRAGBA, Helena and ~~IZDUBSKI, Marian~~, Second Clinic of In-
ternal Diseases (II Klinika Chorob Wewnętrznych), AM [Aka-
demia Medyczna, Medical Academy] in Lodz (Director: Prof.
Dr. med. sci. J. JAKUBOWSKI)

"Case of Subacute Dermatomyositis Successfully Treated with
ACTH and Prednisone."

Warsaw-Krakow, Pracznik Lekarski, Vol 19, Ser 11, No 1, 63,
pp 14-16.

Abstract: [Authors' English summary modified] The authors
describe the case and its treatment, and discuss the ob-
tained results. There are 13 references, of which two (2)
are German, four (4) Eastern, and the balance Polish.

IZDIEFSKI, S.

Care of motor vehicles during the winter. p. 334
(MOTORYZACJA, Vol. 11, No. 12, Dec. 1956, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sept. 1957, Uncl.

USSR/Medicine - Microclimate
Medicine - Public Health

May 49

"Experiment in the Physiologic-Hygienic Study of the
Microclimate of Vesture," A. M. Izdeviskiy, Ukrainian
Inst of Communal Hygiene, 3 pp

"Cig 1 San" No 5

Collected data on differences in temperature,
humidity, movement of air, and solar radiation in
vesture and in an open section of the city. Studied
physiological effects of these factors on men.
Proved radiation temperature has greatest effect in
changing heat exchange in the human body in the

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USSR/Medicine - Microclimate (Contd)

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vesture, and discusses how these various forms of
human body exchange vary.

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IZDEVISKIY, A. M.

IVDEBSKIY, A.M., kandidat meditsinskikh nauk (Kiyev)

Hygienic standards for gymnasia to be used for weight lifting.
Vrach.delo no.9:973-975 S '57. (MIRA 10:1)

1. Ukrainskiy institut kommunal'noy gigiyeny
(GIMNASIUMS--HYGIENIC ASPECTS).

IZDEBSKIY, A.H., kand.med.nauk (Kiyev)

Microclimatic indicators as hygienic aspects residential buildings and
therapeutic institutions. Vrach.delo no.8:841-843 Ag '58 (MIRA 11:8)

1. Ukrainskiy institut kommunal'noy gigiyeny.
(TEMPERATURE)
(HUMIDITY)

IZDEBSKIY, A.M.; ZARIVAYSKAYA, Kh.A.; SVETLAYA, Ye.N.; TSVETKOVA, I.N.

Hygienic requirements for natural lighting of residential
structures in climatic zones of the Ukrainian S.S.R. Gig.
1 san. 24 no.6:70-71 Je '59. (MIRA 12:8)

1. Iz Ukrainiskogo instituta kommunal'noy gigiyeny.

(ILLUMINATION

hyg. requirements for natural lighting of
residential structures in Ukraine (Rus))

KALYUZHNYI, D.K., prof., otv.red.; KOROTSKIY, A.S., kand.med.nauk, red.;
IZDEBSKIY, A.M., kand.med.nauk, red.; KVITEITSKAYA, H.N., kand.
med.nauk, red.; KRYZHANOVSKAYA, V.V., kand.med.nauk, red.; MARTI-
NYUK, V.Z., prof., red.; PETROV, Yu.L., kand.med.nauk, red.;
POZNAHSKIY, S.S., kand.med.nauk, red.; STOVUN, A.T., kand.med.
nauk, red.; SHMAL', D.D., kand.med.nauk, red.; POTOTSKAYA, L.A.,
tekhred.

[Hygienic study and improvement of the environment] Gigenich-
skoe izucheniye i ozdorovleniye vneshnei sredy. Kiev, Gos.med.izd-vo
USSR, 1959. 331 p. (MIRA 13:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut kommunal'noy gi-
gieny. 2. Predsedatel' Problemy komissii Ministerstva zdorovo-
okhraneniya USSR (for Kalyuzhnyy).
(PUBLIC HEALTH)

KALYUZHNYY, D.N., prof.; IZDERSKIY, A.M., kand.med.nauk; TANYSEVA, N.Ya.,
kand.med.nauk; PAL'GOV, V.I., Kand.med.nauk; LAKHNO, Ye.S., kand.
med.nauk

"Handbook on municipal hygiene, Vol.1." Reviewed by D.N.Kaliuzhnyi
and others. Gig. i san. 27 no.3:102-104 Mr '62. (MIRA 15:4)

1. Chlen-korrespondent AMI SSSR (for Kalyuzhnyi).
(PUBLIC HEALTH)

IZDEBSKIY, V.M. [Izdebs'kiy, V.M.]

Ecology of the birch mouse in Kherson Province. Zbir. prats' Zool.muz.
AN URSR no.31:110-112 '62. (MIRA 17:2)

IZER, Jiri, inz.

The Swedish BoBo Rb 1 electric locomotive. Doprava 7 no.2:
155-156 '65.

IZDINSKY, O.

Tensometric measuring of a cylindrical pressure vessel with
conical reduction. p. 197. ZVARNIE. (Ministerstvo prumyslu
a rudnych bani a Ministerstvo strojarstva) Bratislava.
Vol. 5, no. 6, June 1956.

SOURCE: East European Accessions List, (EEAL).
Library of Congress. Vol. 5, no. 12,
December 1956.

IZDINSKY, O.

Causes of cracking of metal sheets on the bottom of river boats. p. 108.

ZVARACSKY SBORNIK. (Slovenska akademie vied) Bratislava, Czechoslovakia. Vol. 8, no. 1, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 10, Oct. 1959. Uncl.

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26475

Z/046/61/000/003/002/002

DO07/D102

AUTHOR: Iždinský, Oskár, Engineer

TITLE: Mechanical properties of welded joints of 424201.6 Al alloy

PERIODICAL: Zváračský sborník, no. 3, 1961, 293-308

TEXT: The article describes welding tests performed at the VÚZ Bratislava with Al-Cu₄-Mg alloy (material 424201.6) to determine the influence of welding heat on the mechanical properties of the welded joint as compared to the properties of the parent material and/or to rivet and screw joints. In addition to Al, the alloy metal contains 4.35% Cu, 0.65% Mn, 0.67% Mg, 0.20% Fe, 0.10% Si, and 0.05% Zn and in hardened state has the following mechanical properties: Tensile strength σ_{10} = 14%; ultimate yield point σ_{Kt} = 26 kg/mm²; ultimate strength σ_{Pt} = 40 kg/mm². The material for the tests was delivered by the Kovohuty Břidličná in plates of 2,000 x 1,000 x 8 mm. The following three welding methods were employed: (a) Automatic, argon-gas shielded welding using a steel backing plate with an oval groove;

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D007/D102

(b) Argonarc method with nonconsumable tungsten electrode, 5 mm in diameter (no. 2 argon-holder); (c) Flame welding with preheating to 150°C, using Magna 41 flux and a no. 5 torch. Pickled 424232 filler wire, 2 mm in diameter, was used for automatic welding, and 5-mm-diameter wire was used for argonarc and flame welding. Four 500 x 150 x 8 mm plates were welded using each of the three methods. Welding edges were prepared normally for automatic welding, and they were beveled to 70° (V-weld) for argonarc and flame welding. The welds were X-rayed before test specimens of the parent and weld metals were prepared. Some of the specimens were heat-treated (quenching at 500°C in water of 20°C; hardening at room temperature). Specimens were subjected to the following tests: Brinell hardness test at H_B 2.5/31.25/30; strength test according to ČSN 1236 and 42 0321; bending test according to ČSN 1236; notch-impact test; and fatigue test (on a 20-ton Schenck pulsator with a maximum frequency of 2,200 rpm). For comparative purposes, single-row double shear rivet joints were made by cold-riveting, while screw joints were made with high-strength prestressed screws of plates with rough, brushed and sand-blasted surfaces, respectively. The results of the

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Mechanical properties...

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D007/D102

tests can be summarized as follows: (1) The welding heat affects a zone 80 - 90 mm along the welded seam and impairs the mechanical properties of the parent metal; (2) The strength of the welded joint reached only 40 - 50% of the strength of the parent metal when 424232 filler wire was used, and 60 - 70% when 424201 filler wire was used; (3) The deformability of the weld is much lower than that of the parent metal. The maximum bending angle was 40° in one case, and even smaller in other cases; (4) The notch-toughness, which was already a poor 2.3 - 2.7 kgm/cm² for the parent metal, was further impaired; (5) The fatigue limit dropped 28 - 45%. Increased strength of the welded joint has no influence on the fatigue limit when cyclic stress is applied. In tests of fatigue strength for finite life, it was found that the steepness of the Wöhler lines increased with increasing strength; (6) Under cyclic stress, the use factor of the parent metal is reduced, since the upper border of the Smith diagram is limited by the yield strength of the welded joint which is at least 50% lower than that of the parent metal; (7) The fatigue limit of the rivet joints is 45 - 55% lower than that of the parent metal. Under average cyclic stress, the fatigue strength of rivet

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D007/D102

Mechanical properties....

joints drops faster than that of welded joints and the use factor of the parent metal is also lower; (8) The fatigue strength of pre-stressed-screw joints with unprocessed surfaces is only 18% lower than that of the parent metal, and reaches that of the parent metal when the joint surfaces are brushed or sand blasted; (9) Welded joints do not reach the properties of the parent metal even when heat-treated and re-hardened. While the use of 424232 filler material effected an increase of strength and notch toughness, the use of the hardenable 424201 filler material failed to improve the mechanical properties after postwelding heat treatment. Neither could an advantageous influence of postwelding heat treatment be observed in bending and cyclic-stress tests. Tests resulted in somewhat more spread and steeper Wöhler lines at practically the same lower fatigue limit; (10) The heat treatment partially reduced the heat-affected zone. However, the welded material remained soft and unhardened even when hardenable filler material was used. This is attributable to the fact that alloying elements are burnt during welding. There are 14 figures, 1 table and 7 references: 6 Soviet-bloc, 1 non-Soviet-

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IZDINSKY, Oskar, inz., ScC.

Some results of the static and fatigue tests of the aluminum alloy 42 4222.7. Zvaranie 12 no. 6: 163-167 Jo '63.

5/137/62/000/004/162/201
A154/A101

AUTHOR: Izdinsky, O..

TITLE: The mechanical properties of welds made between 424400,7 aluminum alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 17, abstract 4E77 ("Zváranie", 1961, 10, no. 11, 330 - 335, Slovak, Russian, English and German summaries)

TEXT: Static and fatigue tests were made of butt welds in Al-Mg-Si alloy. The test results were compared with the mechanical properties of the base metal and threaded joints. The welds were made by automatic welding and arc welding in an argon medium. The tests were made on welds in the non-heat-treated state and in the quenched and hardened state. The threaded joints were made by the normal means and had prehigh-stressed screws and variously treated butt surfaces. It is stated that the welded joints do not yet give satisfactory results, whereas the joints with the prehigh-stressed screws behave satisfactorily also under cyclic stress.

[Abstracter's note: Complete translation]

V. Tarisova

Card 1/1

IZDINSKY, Oskar, inz. CSc.

Shape strength of welded and riveted I-beams from the 42
4201.6 and 42 4203.6 Al alloys. Inz stavby 12 no. 9/402.
404 S '64.

1. Research Institute of Welding, Bratislava.

VEDINOVY, Oskard, Ing. CSc.

Results of mechanical property tests of the 404203, 6 aluminum alloy welds. Zvaranie 13 no.11:319-323 N '64.

1. Research Institute of Welding, Bratislava.

IZDRIK, V. M.

IZDRIK, V. M.: "The cultivation of buckwheat under conditions of L'vov Oblast, Ukrainian SSR. L'vov, 1955. Odessa Agricultural Inst. (Dissertations for the degree of Candidate of Agricultural Science.)

SO: Knizhnaya Letoris' No. 50 10 December 1955. Moscow.

MATEI SCU, Dan, prof. ing.; FLESERIU, I.; FLESERIU, E.; GAGEANU, L.;
BOTA, V.; ROSU, D.; FILIMON, I.; MAIOR, N.; IERAILA, V.;
PAUNESCU, M.; ROSA, Sidonia

Economical, technical and scientific study on the construction
of some apartment houses with metallic framework of light elements.
Pt. 1-3. Bul St si Tehn Tim 7:287-321 '62.

PAUNESCU, M., ing., MIHAIESCU, A., ing., CUTESCU, D., ing.
IZDRAILA, V., ing.

Utilization of acicular filters and secant piles for the
construction of silo foundations. Rev constr si mat constr
15 no. 11: 580-585 N '63.

COUNTRY : USSR
C. CATEGORY :

M-L

AG. JOUR. : RZBiol., No. 7, 1958, No. 87038

AUTHOR : Izdrik, V. M.

INST. :

TITLE : Some Procedures for Increasing the Yield
of Buckwheat in the L'vovskaya Oblast'.

ORIG. PUB. : Zerkledeliye, 1957, No 2, 33-35

ABSTRACT : A study was made of the effects of the time and methods of sowing, and of application of phosphorite meal fertilizer, on yields of buckwheat of the variety Virnikovskaya local (experiments during 1952-1955 by the L'vov Agricultural Institute). Under conditions of the L'vovskaya Oblast' buckwheat grows best when planted between 15th and 25th of May. When sowed at that time, the plants develop under conditions of low temperature which has a beneficial effect on yield of grain. When sowed in June, flowering and ripening takes place at a high temperature (up to 30°C). During this period heavy precipitation usually occurs as a result of which the buckwheat develops

CARD: 1/2

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USSR / Cultivated Plants. Grains. Legumes. Tropical M-1
Cereals.

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6259

is 80 kg/ha. In the case of wide-row sowing
the best rate is 50 kg/ha.

Card 2/2

IZEL'SON, Ya.Z.; RAFIKOV, S.R.; SUVOROV, B.V.

Oxidation of organic compounds. Report No.34: Dissociation of
vanadium pentoxide. Izv.AN Kazakh. SSR. Ser. tekhn. i khim. nauk
no.1:11-13 '63. (MIRA 17:3)

IZERA, V.

SCIENCE

PERIODICALS: METEOROLOGICKE ZPRÁVY. Vol. 11, no. 4/5, Oct. 1958

IZERA, V. A new design of the apparatus for measuring diurnal arch of the sun. p. 69

Monthly list of East European Accessions (EML) LC, Vol. 8, no. 5
May 1959 Unclass

IZINGI, A.I., and Phys-Math Sci — (disse) "Study of components
of a vertical electric current ^{of the} ~~in the~~ ^{method} ~~method~~." Izv., 1959. 2 pp
(Main Editorial Section of Hydrometeorological Service under the
Council of Ministers USSR. Main Geophysical Observatory in
A.I. Voyeykov), 180 copies (31,27-59, 185)

-6-

SOV/49-59-6-17/21

AUTHOR: Izergin, A. M.

TITLE: The Air-Earth Convective Electric Current.

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 6, pp 919-923 (USSR)

ABSTRACT: The vertical electric current in the atmosphere (Eq 1) can be determined by one of the following two methods: 1 - by measuring the magnitude of the charge (Refs 5 to 7) or; 2 - by measuring the tension (Eq 2) (Refs 8-10). The convective current can be expressed as the density of the volumetric electric charge at the earth's surface, Eq (3). The functional relationship in this case will be defined as Eq (4) for the conditions, Eq (5), i.e. the current can be calculated from Eq (6) (Ref 2). In order to verify the above equation, the experiments were carried out with an earthed, horizontally placed plate, the current in it being calculated from Eq (7). The measurement of the conductivity and the induction was performed by means of a netted screen spread horizontally above the plate. The current below it was calculated from Eq (8). The results of experiment are illustrated in the table on p 920, and in Figs 1 and 2. Fig 1 shows the diurnal distribution of the convective current, Fig 2

Card 1/2

307/49-59-6-17/21

The Air-Earth Convective Electric Current

illustrates the current observed on September 3-4, 1957. Thanks are given to I. M. Imyanitov and I. I. Bessonov for their advice. There are 2 figures, 1 table and 20 references, of which 10 are Soviet, 6 are English and 4 German.

ASSOCIATION: Kirovskiy gosudarstvennyy pedagogicheskiy institut imeni V. I. Lenina (Kirov State Pedagogical Institute im V.I.Lenin)

SUBMITTED: May 5, 1958.

Card 2/2

WAS : BOOK PRODUCTION

807/2576
807/2-8-97

Handwritten: Olmstead 600123b smy 030077610719

For many atmospheric electricists (problems in Atmospheric Electricity) Indianapolis, O: McGraw-Hill, 1960. 115 p. (Series: Its Study, 97).
Reprints also issued. 2,000 copies printed.

[illegible]Ed. (Title page): T. H. Symington, Compiler of Prices and Measurements;
Ed. (Inside front): T. V. Campbell, Tech. Ed.; H. V. Volmer,

REVIEW: This publication is intended for astrophysicists and scientists concerned with the problem of electromagnetic variability. The book can also be used by graduate students at astronomy-related institutions and by university students studying physics of the atmosphere.

CONTRIBUTOR: This issue of the Transactions of the Main Geophysical Observatory is dedicated to the 100th anniversary of the birth of the famous Soviet geophysicist, Professor A. I. Vinnikov. Contributions must be received in a "manuscript" envelope by 15 November 1989.

and last names are used as described. No personal data are mentioned. References accompany individual articles.

Statement of Helen Chang, a

Changes in the Character of Deaths During

Electrical Charges at Reynolds in Texas and Canada

Mathematical Characteristics

Comparison of Components of Vertical Markets

Abstract - On the theory of an electrostatic

...in the context of a valuable tool for modeling the atmosphere and its interactions with the land surface.

The Potential Gradient of the Atmospheric Electrical Field

Transporters According to Their Mobility and Concentration

AVAILABILITY: Library of Congress

2/4 230

7/20/2007
10-14-50

S/049/62/000/005/003/003
D207/D308

3, 5/30

AUTHOR:

Izergin, A.M.

TITLE:

Vertical convective electric current in the atmosphere

PERIODICAL:

Akademiya nauk SSSR. Izvestiya. Seriya geofizicheskaya, no. 5, 1962, 709 - 710

TEXT:

The work is an extension of an earlier investigation by J.H. Hraakevik, reported at the Second Conference on Atmospheric Electricity held in Portsmouth (USA) on May 22 - 23, 1958. The present author reports calculations of the density of the vertical convective current (j_{cv}) in the atmosphere near the earth's surface. The values of j_{cv} were deduced from 1956 and 1957 measurements of the density of the total vertical current to earth (i) and the density of the conduction current near the earth (j_{cn}); $j_{cv} = i - j_{cn}$. It was found that j_{cv} was 34 - 64 % of i and opposite in direction to it, except on one occasion in 1956 when j_{cv} was 10 % of i and in the same direction as i .

Card 1/2

IZERGIN, A. P.

"Dielectric Properties of Mica of Phlogopite, Muscovite, and Some Crystal Hydrates in Electric Fields of Industrial and Audible Frequencies." Tomsk State U imeni V. V. Kuybyshev, Tomsk, 1955. (Dissertation for the Degree of Candidate of Physical and Mathematical Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

137-1958-2-2763

Translation from Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 79 (USSR)

AUTHOR: Izergin, A. P.

TITLE: On the Growing of Germanium Monocrystals From a Melt (K voprosu o vyrashchivanii monokristallov germaniya iz rasplava)

PERIODICAL: V sb.: Vopr. metallurgii i fiz. poluprovodnikov. Moscow, AN SSSR, 1957, pp 47-49

ABSTRACT: A comparison is made of designs of apparatus for pulling single crystals of Ge by the Chokhral'skiy method with the aid of either a slotted graphite heater or by heating the melt from the outside of a quartz vacuum chamber in a high-frequency field or in a resistance furnace. The opinion is expressed that the latter procedure is better, because it tends to eliminate the graphite, steel, and Cu elements which are sources of impurities that get into a melt. Schematic drawings and descriptions of the apparatus are included.

Yu.Sh.

1. Crystals--Growing

Card 1/1

LEONIN, N. P.,

"A method and equipment for the purification of liquids from small admixture quantities"

Report presented at a Conference on Solid Dielectrics and Semiconductors,
Tomsk Polytechnical Inst., 3-8 Feb. 58.
(Elektrichestvo, '58, No. 7, 83-86)

IZERGIN, A. P.

Izergin, A. P. and others (SFTI)

"A method for the breeding of germanium monocrystals with even distribution of the admixtures from the melt without melting pot"

Report presented at a Conference on Solid Dielectrics and Semiconductors,
Tomsk Polytechnical Inst., 3-8 Feb. 58.
(Elektrichestvo, '58, No. 7, 83-86)

AUTHOR: Izergin, A. P.

TITLE: Purification of Liquids by the Method of Zone Melting
(Ochistka zhidkostey metodom zonnay plavki)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, fizika, 1958,
Nr 5, pp 115-116 (USSR)

ABSTRACT: The paper was presented at the Conference of Higher Education Establishments on Dielectrics and Semiconductors, Tomsk, February, 1958. The method of zone melting is used widely in purification of solids (Refs.1-6). Its theory was given by Reiss (Ref.7). The present paper deals with application of the zone melting method to purification of certain liquids. Purification of water by means of zone melting was briefly reported at the All-Union Conference on Semiconducting Materials, Moscow, April 1957. In the study of properties of semiconducting monocrystals the author found it necessary to use very pure water and very pure acids in preparation of etchants. This suggested that the method of zone melting might possible be applied to purify some liquids. The method is, in principle, very simple. A liquid is frozen by means of liquid air or by some other method and then subjected to the usual operations of zone melting. The first liquid to be subjected to zone melting purification was water. Doubly

Card 1/3

NOV/137-58-5-24/35

Purification of Liquids by the Method of Zone Melting

distilled water was frozen in a quartz boat. Two molten zones were produced in the ice block and the boat was moved at the rate of 2 cm/hour. Both ends of the ice block were cut off after zone melting and the middle portion was melted and heated to +20°C. It was found that the electrical resistivity of water, which was 4.7×10^6 ohm cm before zone melting purification, increased after quadruple zone melting to 4.2×10^7 ohm cm. This resistivity fell quickly with time, probably because of dissolution of the quartz boat. To purify alcohol, the latter was placed in a polytetrafluorethylene (Fluorplast-4) boat. The alcohol was cooled with liquid air until it froze. After quadruple zone melting the amount of water in the alcohol was reduced from the original 4% to 1%. The author also purified hydrochloric acid with 0.3% of iron. Again, a Fluorplast-4 boat was used and the acid was frozen by means of liquid air. The molten zone moved at the rate of 2 cm/hour. After quadruple zone melting the content of iron fell to 0.05%. Student Yu. S. Pablenko took part in this work. L.N.Razanova

Card 2/3

24(2)

SOV/139-59-1-18/34

AUTHORS: Izergin A.P., Pavlenko Yu.S. and Stroitelev S.A.

TITLE: On the Effect of Vibrations on the Form of Monocrystals Grown by the Chokhralskiy (Czochralski) Method (O vliyanii vibratsiy na formu monokristallov, vyrashchennykh po metodu Chokhral'skogo)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1959, Nr 1, pp 107-110 (USSR)

ABSTRACT: Alkali-halide monocrystals grown from melt by the Czochralski method at constant temperature and a constant rate of withdrawal are roughly cylindrical in shape. Cross-sections of such crystals depend primarily on the form of the melt meniscus which is determined by the surface tension and the temperature distribution in the crucible. When monocrystals are grown by the Czochralski method with rotation of the seed, vibrations of the melt and the crystal holder usually occur. It was found that monocrystals grown under the conditions of rotation and vibration were no longer cylindrical but had definite faces. The cross-sections were roughly square if the seed was withdrawn in the direction $[100]$ (Fig 1a) and trigonal (triangular) or ditrigonal in the direction $[111]$

Card 1/4

SOV/139-59.1-18/34

On the Effect of Vibrations on the Form of Monocrystals Grown by the Czochralski Method

(Fig 17). In the first case the crystal is a square pseudo-prism whose side faces in KCl correspond to $\{100\}$. In the second case the crystal is a trigonal or ditrigonal prism and its faces were "hatched", i.e. they consisted of steps formed by faces of a cube. These effects were also observed on growing germanium monocrystals by the Czochralski method using the apparatus constructed at the Siberian Physico-Technical Institute and described earlier (Ref 1). Germanium monocrystals grown in the direction $\{111\}$ without vibrations and without rotation of the seed, were of roughly cylindrical shape, as shown by Fig 2a. On drawing of germanium crystals in the direction $\{100\}$ a roughly square pseudo-prism was obtained (Fig 2b) whose side face corresponds in general to the crystal direction $\{111\}$ but it is "hatched" and it consists of steps formed by octahedral faces $\{111\}$. When germanium crystals were drawn in the direction $\{111\}$ a trigonal or ditrigonal pseudo-prism was obtained (Fig 2c), whose side faces were also "hatched" and formed octahedral steps. The tendency of germanium monocrystals to assume the form

Card 2/4

SOV/139-59-1-18/34

On the Effect of Vibrations on the Form of Monocrystals Grown by the Czochralski Method

{111} is quite natural since in free growth in a melt (when the crystal is not drawn) germanium grows in octahedral form (Ref 3). The authors grew crystals without rotation of the seed but transmitting 2 - 20 c/s vibrations directly to the melt itself. It was found that increase of the vibration intensity produced crystals with clearer faces than rotation of the seed and consequent vibrations. Crystals of small diameter were found to have more clearly defined faces (Fig 3). At the same amplitude and frequency of vibrations the faces of germanium monocrystals appeared less clearly than in alkali-halide salts. The authors suggest that the vibrations of the melt and the crystal holder and rotation of the seed equalise the conditions of crystallization along the whole surface of separation between the solid and liquid phases. This probably

Card 3/4

SOV/139-59-1-18/34

On the Effect of Vibrations on the Form of Monocrystals Grown by the Czochralski Method

makes it possible for the crystal to grow its natural faces.

There are 3 figures and 3 references, 2 of which are Soviet and 1 translation from English into Russian.

ASSOCIATION: Sibirskiy Fiziko-tekhnicheskii Institut pri Tomskom Gosuniversitete imeni V.V. Kuybysheva
Card 4/4 (Siberian Physico-Technical Institute at Tomsk State University imeni V.V. Kuybyshev)

SUBMITTED: June 19, 1958

L. LERGIN, A.P.

66306

~~9(3), 24(3)~~ 24.7100

SOV/143-59-5-4/19

AUTHORS: Vorob'yev, A.A., Doctor of Physical and Mathematical Sciences, Professor, and Lergin, A.P., Candidate of Technical Sciences, and Kevroleva, K. M.

TITLE: Electrical Properties of Crystal Hydrates

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 5, pp 26-34 (USSR)

ABSTRACT: The authors review the research work conducted in the field of electrical properties of crystal hydrates at Tomsk vuzes. The specific inductive capacitance and the dielectric loss angle were discussed in this paper, as well as the electrical strength of crystal hydrates. The investigations were conducted in wide ranges of temperatures and frequencies and different durations of single high-voltage pulses. At the laboratories of the Tomskiy politekhnicheskii institut (Tomsk Polytechnic Institute) and the Sibirskiy fiziko-tekhnicheskogo institut (Siberian Institute of Physics and Technology) investigations were conducted on the dielectric properties of crystal hydrates in

Card 1/4

66306

Electrical Properties of Crystal Hydrates

SOV/143-59-5-4/19

dependence of temperature, frequency of the electrical field, degree of dehydration, chemical composition and structure of matter. A large number of nice types of the East Siberian deposits were studied. In papers of N.P. Bogoroditskiy and V.N. Malyshev /Ref 17/, S. M. Yakimets /Ref 27/ and M.M. Mikhaylov /Ref 37/ different results were obtained for various characteristics of mica. In the papers /Ref 4-10/ by K.A. Vodop'yanov, A.P. Izergin, I.G. Vorozhtsova, the maxima of curves are shown, representing the temperature dependencies of $\tan \delta$ and ϵ in the phlogopite mica, and one frequency maximum of $\tan \delta$. The dependence of $\tan \delta$ and ϵ in phlogopite mica frequency and temperatures are shown in graphs, Figure 1, 2 and 3. Figure 4 shows a graph of the temperature dependence of ϵ and $\tan \delta$ in muscovite, while Figure 5 shows the temperature dependence of muscovite before and after exposure to gamma radiation. Figures 6, 7, 8, show graphs of the frequency and temperature dependencies of $\tan \delta$ and ϵ in gypsum. At the Laboratoriya TVN Tomskogo politekhnicheskogo instituta -TPI- (Laboratory TVN of the

Card 2/4

66306

Electrical Properties of Crystals Hydrates

SOV/143-59-5-4/19

the work of Hackett and A.M. Thomas, IEE /Ref 247. The authors state in their conclusions that a rotation of polarized molecules with a low bond energy is possible in crystallohydrates. The position of frequency and temperature maxima of $\tan \delta$ and ϵ are determined by the structure of crystallohydrates. When manufacturing electrical insulation materials composed of crystallohydrates it should be noticed that polarized molecules may cause relaxation losses and that crystallohydrates work reliably only to the dehydration temperature. There are 11 graphs, 1 table and 24 references, 23 of which are Soviet and 1 English.

This article was presented by the kafedra tekhniki vysokikh napryazheniy (Chair of High Voltage Engineering).

ASSOCIATION: Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii institut imeni S.M. Kirova (Tomsk - Red Labor Banner Order - Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: November 4, 1958
Card 4/4

Investigation of gallium arsenide

8/237/18/000/002/059/144
AC05/A101

more, and for the p-type 10^{22}), counter voltages, and voltage breakdown resistance were obtained. The height of the rectifying barrier was found to be equal to 0.8 ev.

B. Golovin

[Abstracter's note: Complete translation]

Card 2/2

Determination of

S/139/62/000/005/007/015
E073/E335

lowest dislocation density was $5 \times 10^3 \text{ cm}^{-3}$; the highest was $5 \times 10^6 \text{ cm}^{-3}$. The density of dislocations increased along the radius from the centre towards the surface due to the presence of a radial temperature gradient in the ingot. Zinc-alloyed GaAs specimens had a relatively low dislocation density. Detailed information on the fusion regimes, structure and electric characteristics of GaAs produced by the mentioned method will be given in articles to be published. There are 3 figures and 1 table. ✓

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri
Tomskom gosuniversitete imeni V.V. Kuybysheva
(Siberian Physicotechnical Institute of Tomsk
State University imeni V.V. Kuybyshev)

SUBMITTED: July 19, 1961

Card 2/2

Investigation of the kinetic characteristics of highly doped indium antimonide. V. A. Kokoshkin (10 minutes).

Synthesis, doping, and preparation of single crystals of gallium arsenide. A. P. Izergin, A. G. Grizor'yeva, V. N. Chernigovskaya, G. M. Ikonnikova.

Crystallization of gallium arsenide under different pressures of arsenic vapor. S. S. Khlubkov, V. A. Zelivanova, G. M. Ikonnikova.

Influence of impurities on the electrical properties of gallium arsenide. M. A. Krivov, Ye. V. Malisova, C. V. Malyanov.
(Presented by M. A. Krivov--15 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

GRIGOR'YEVA, A.G.; CHERNIGOVSKAYA, V.N.; IZERGIN, A.P.

Gallium arsenide synthesis from the melt. Izv.vys.ucheb.zav.;fiz.no.2:
180 '63.

(MIRA 16:5)
1. Sibirskiy fiziko-tekhnicheskoy institut pri Tomskom gosudarstvennom
universitete imeni Kuybysheva.
(Gallium arsenide crystals--Growth)

L 10766-63

EWI(1)/EWG(k)/EWP(q)/EWI(m)/
HDS--AFTC/ASD/ESD-3--P1-4/P2-4--AT/IJP(G)/JD
ACCESSION NR: AP3004032

8/0139/63/000/001/0023/0026

AUTHOR: Izergin, A. P.; Selivanova, V. A.; Chernigovskaya, V. N.

TITLE: The growing of gallium arsenide single crystals and single-crystal blocks by the zone-melting method

SOURCE: IVUZ. Fizika, no. 3, 1963, 23-26

TOPIC TAGS: gallium arsenide crystal growth, gallium arsenide zone melting

ABSTRACT: Conditions for obtaining single-crystal ingots of gallium arsenide by the zone melting method have been studied. Synthesis, zonal purification, and crystallization were carried out in one tube with high-frequency heating by a GI-15-M generator. The starting components, gallium and arsenic, were placed in the tube separately. It was found that a lowering of the radial and axial temperature gradients resulted in larger single-crystal blocks. This can be attributed to the reduced speed of crystallization, which in this case was 3.5 mm/hr. The crystallization front under these conditions approached the plane. The duration of the contact between the melt and the container was reduced for a given speed of movement. The zone-melting method is considered

Card 1/2/

Siberian Physicochemical Institute, Novosibirsk, U.S.S.R.

GRIGORIYEVA, A.G.; CHERNIGOVSKAYA, V.H.; IZERGIN, A.P.

Refinement of gallium arsenide by the zone dissolution method. Izv.
vys. ucheb. zav.; fiz. no.4:16-18 '63. (MIRA 16:9)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosudarstven-
nom universitete imeni V.V. Kuybysheva.
(Gallium arsenido)

ACCESSION NR: AP4025087

S/0139/63/000/006/0049/0052

AUTHORS: Ikonnikova, G. M.; Izergin, A. P.

TITLE: Effect of melt vibrations on a type of KCl crystals

SOURCE: IVUZ. Fizika, no. 6, 1963, 49-52

TOPIC TAGS: induced oscillation, crystal growth, constant frequency, variable amplitude, natural faceting

ABSTRACT: The effect of externally induced oscillations on a KCl melt, at various amplitudes, on the form of the crystal growth has been studied. The Chokhralskiy method is used for the crystal growth, as described by A. P. Izergin, Yu. S. Pavlenko, and S. A. Stroitelev (Izv. Vuzov SSSR, Fizika No. 1, str. 107-111), from a melt placed in a crucible and vibrated with 100-cycle constant frequency but with a variable amplitude from 0.06 to 0.2 mm measured on a vibrometer. The vibrations are seen to promote natural faceting. Increasing the amplitude from 0 to 0.2 mm causes a transition from a {hko} face to a {100} face on the crystal surface. The larger the oscillation amplitude the lower is the face kept on the crystal and the simpler is its form. "The authors are grateful to V. A. Yermolayev for his help in this work." Orig. art. has: 2 figures and 2 tables.

Card 1/2

ACCESSION NR: AP4025087

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosuniversitete
imeni V.V. Klyby*sheva (Siberian Physical and Technical Institut . Tomsk State
University)

SUBMITTED: 14Jul62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 005

OTHER: 001

Card 2/2

ACCESSION NR: AP4025100

S/0139/63/000/006/0177/0178

AUTHORS: Chernigovskaya, V. N.; Grigor'yeva, A. G.; Izargin, A. P.

TITLE: Synthesis of gallium arsenide in graphite boats

SOURCE: IVUZ. Fizika, no. 6, 1963, 177-178

TOPIC TAGS: gallium arsenide, gallium arsenide synthesis, graphite boat, impurity, Mg, Cu, Fe, Al, Si, semiconductor, silicon contamination

ABSTRACT: A new apparatus to be used in gallium arsenide synthesis is described. It involves an elongated square-section graphite boat so suspended within a quartz glass ampule as to eliminate the graphite-quartz contact (see Fig. 1 of the Enclosure). The apparatus was developed to prevent the silicon contamination resulting from the reaction of graphite and quartz at the temperature of 1240C necessary for the reaction and for zonal purification of gallium arsenide. Material produced in this apparatus was free of Si. Its content of Mg, Cu, Fe, and Al ranged from zero to acceptably small amounts throughout the body of each sample. Orig. art. has: 1 figure and 2 tables.

Card 1/3
Card:

ACCESSION NR: AP4025100

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosuniversitete
imeni V. V. Kuybyshcheva (Siberian Physical and Technical Institute, Tomsk State
University)

SUBMITTED: 10Dec62

DATE ACQ: 14Feb64

ENCL: 01

SUB CODE: ML, PH

NO REF SOV: 001

OTHER: 002

Card 2/3

Card 3/3

ACCESSION NR: AP4012291

S/0070/64/009/001/0130/0131

AUTHORS: Ikonnikova, G. M.; Isargin, A. P.

TITLE: Problem of lead admixture entering potassium chloride crystals under the action of vibrations

SOURCE: Kristallografiya, v. 9, no. 1, 1964, 130-131

TOPIC TAGS: Pb admixture, Pb in KCl, vibration activity, crystalline growth, base halogen crystal, vibration amplitude, absorption spectrum, F center, absorption coefficient, activator, crystalline lattice

ABSTRACT: The problem in this work consisted of growing single KCl-Pb crystals by the Chokhralskiy method while vibrating the melt at a frequency of 100 hertz. It was desired to determine the influence of various vibration amplitudes on the entrance of Pb into the crystalline lattice. The size of each sample, the amount of PbCl₂, and all experimental conditions were kept constant. Optical absorption spectra were used to study the influence of vibrations on the growing crystal and to determine the amount of admixture influencing the structure of the crystalline lattice. These spectra were recorded at the amplitudes of 0.01-0.2 mm with a spectrophotometer SF-4 at wave lengths of 210-800 mμ and at room temperature.

Card 2/2

34842-65 EWT(1)/EWT(m)/EWP(t)/EEC(b)-2/EWP(b)/EWA(h)/EWA(c) Feb 1961
EXPRESSION NO. APPROVED

A TOWER GEORGE A. P. KOSLOVSKAYA Y. V. KOSLOVSKAYA

ARSTAL

The chemistry of grain and the marketing of grain products
tekhn. i ekon. lit-ry do vyprosam zagotovki, 1961. 211 p.

IZERGINA, A.G.

Effect of adrenaline on disorders of the higher nervous activity
of white rats caused by the infectious disease pasteurellosis.
Trudy Inst.vys.nerv.deiat.Ser.patofiziol. 6:194-206 '59

(MIRA 12:10)

(ADRENALINE)

(SWINE PLAGUE)

(CONDITIONED RESPONSE)

USPENSKAYA, M.S.; IZBERGINA, A.G.

Effect of unithiol on the excretion of Dische-positive
compounds in the urine of rats exposed to polonium-210.
Radiobiologiya 3 no.5:762-765 '63. (MIRA 17:4)

Card 1/2

- 143 -

IZERGINA, M.M., dotsent

Effect of trace elements on the yield and chemical composition
of carrots. Uch. zap. Petrozav. gos. un. 12 no.3:15-18 '64.
(MIRA 19:1)

1. Kafedra rasteniyevodstva Petrozavodskogo gosudarstvennogo
universiteta imeni O.V. Kuusinen.

I. 3778-66 EWT(m)/ENA(m)-2 IJP(c) GS

ACCESSION NR: AT5007965

S/0000/64/000/000/0932/0936

49
48
35+1

AUTHOR: Vedop'yanov, F. A.; Zhukovskiy, L. S.; Zalmanzon, V. B.; Ivanov, Yu. S.; Izergina, Ye. V.; Kuz'min, A. A.; Prokop'yev, A. I.; Temkin, A. S.; Rubchinskii, S. M.

TITLE: System for the generation of the accelerating field of a 70-Gev proton synchrotron 19

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 932-936

TOPIC TAGS: high energy accelerator, synchrotron, particle beam, magnetic field

ABSTRACT: After the development of a high-precision system of frequency control of the accelerating field of the proton 50-60 Gev synchrotron with critical energy compensation (Mints, A. L., et al., Proc. International Conference on High Energy Accelerators and Instruments, CERN 1959), it was decided to achieve an alternative accelerator with transition through the critical energy, which makes it possible to increase the energy to 70 Gev. In this modification of the accelerator serious difficulties are encountered with the realization of a system for generating an accelerating field with frequency control only according to the H-program. Therefore,

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ACCESSION NR: AT5007965

it was decided to achieve a system with twin frequency control: rough, according to the H -program, and precise, according to the information on the radial and phase position of the accelerated particle beam. The present report discusses the principal characteristics governing the achievement of a programmed FM-generator, a system of frequency control according to information of the position of the accelerated particle bunches, and accelerator installation. The programmed FM-generator consists of the usual elements: transducer of the derived magnetic field strength (inductive coil in the gap of the measuring electromagnet), electronic switch, tube integrator, modulator, FM-oscillator, phase manipulator, amplitude modulator of accelerating voltage, amplifier-distributor, and a system of cable contacts. To obtain energy increase per revolution of $\Delta E \approx 165$ KeV for a rate of change of magnetic field strength of $\dot{H} = 550$ oersteds/second and $\phi_s = 30^\circ$, provision is made for the application of 53 accelerator stations with rated input of 7 kilovolts and 6 kilowatts power. Provisions are also made for the short-duration increase of this voltage, 1.8 times up to the time of beam bunching (around 15 microseconds), and its slow decrease to about 2 times less toward the end of the acceleration cycle with the aim of preserving constant equilibrium phase during the fall in the magnetic field growth rate. The system of frequency control of the accelerating field according to the information on the accelerated particle beam position is similar in

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ACCESSION NR: AT5007965

principle of operation to a system described by Yu. S. Ivanov and A. A. Kuz'min (*Priory i tekhnika eksperimenta*, No. 4, 106, (1962)), which was intended to stabilize the position of the center of gravity of the beam according to radius and phase. Orig. art. has: 1 figure.

ASSOCIATION: Radiotekhnicheskiy institut AN SSSR (Radio Engineering Institute, AN SSSR)

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IZEWSKI, S.

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pedagogic lycees. p. 143.
(Geografia W Szkole, Vol. 10, No. 3, May/June 1957)

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inzh.; TOYBIN, V.A., inzh.; FREYDLIN, G.M., inzh.; KHELYUPINA,
A.K., inzh.; CHERNOV, D.L., inzh.; EYDEL'NANT, L.B., inzh.; ZEMUR,
N.S., inzh., retsenzant; MOLIYUKOV, G.A., inzh., red.; TIKHANOV,
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[Production and installation of pipe systems; reference manual]
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12/26/68, F.A.

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AUTHOR: IZHAK, I.A. PA - 3547
 TITLE: ~~The influence of One-Side Compression on Ceramic BaTiO₃ Di-~~
 electric Susceptibility in Strong Fields. (Issledovaniye vliyaniya
 odносторонnego szhatiya na dielektricheskuyu pronitsayemost'
 keramicheskogo BaTiO₃ v sil'nykh polyakh, Russian)
 PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol 27, Nr 5, pp 953 - 961 (U.S.S.R.)
 ABSTRACT: The relaxation effect in seignette ceramics is of great importance.
 No detailed investigations have, as yet, been carried out. The data
 given here show that this effect is connected with the structure
 of the seignette electricum. The dielectricity constant of the
 ceramic BaTiO₃ diminishes under the influence of a unilateral
 compression and increases in the vertical direction both above
 and below Curie point. This dependence agrees qualitatively with
 the theoretical conclusions obtained for BaTiO₃ monocrystals.
 The relative modification of ϵ under the influence of pressure
 depends on the voltage of the electric field and the temperature,
 and attains 35 - 40% at a pressure of 600 kg/cm², which, in the
 average, amounts to about 6.10⁻⁴ cm²/kg. If pressure is changed,
 relaxation is observed. There is a general tendency towards relax-
 ation: both after pressure is brought to bear and after it ceases
 ϵ decreases in the course of time both in the axial direction

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AUTHOR: IŽAK, I.A. PA - 2079
 TITLE: Contribution of the Thermodynamical Theory of Ferroelectrics
 (K termodinamičeskoj teorii segnetoelektričestva, Russian)
 PERIODICAL: Zhurnal Eksperimental'noi i Teoret.Fiziki, 1957, Vol 32, Nr 1,
 pp 160-162 (U.S.S.R.)
 Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: The author found the data discussed in the following on polycrystalline data of BaTiO_3 . These data confirm some conclusions of the thermodynamic theory: 1) The development of the thermodynamic potential Φ in the case of the existence of elastic tensions σ_{ik} differs from the analytical development in the case of the lack of such tensions only by the components of the polarization P_i^2 . If only one homogeneous compression (e.g. along the x axis) exists, then $\alpha_1 = \alpha - \mathcal{K}_1 \sigma_{xx}$ and $\alpha_2 = \alpha - \mathcal{K}_2 \sigma_{xx}$ are found to exist for the parallel and vertical directions respectively. Here \mathcal{K}_1 and \mathcal{K}_2 denote the striction coefficients and α the development coefficient if compression is lacking. The coefficients α_1 and α_2 can be determined from the measurements of the

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PA - 2079

Contribution of the Thermodynamical Theory of Ferroelectrics.

compression $\Theta + 2,8 \cdot 10^{-3} \text{ .cm}^2/\text{kg}$. (The corresponding theoretical value amounts to $+ 13 \cdot 10^{-3} \text{ .cm}^2/\text{kg}$).

4) Experimental results show that the maximum relative modification of occurs under the influence of pressure in the proximity of the CURIE point.

Comparison between the theoretical conclusions and experimental data confirms the applicability of the theory to polycrystalline BaTiO_3 , at least in the paraelectric range. In the seignette-electric range theory and experiment agree only at temperatures of no more than 10 to 12° below the CURIE point.

ASSOCIATION: State University DNEPROPETROVSK

PRESENTED BY:

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AUTHORS: Izhak, I. A. , Shugurov, O. A.

57-28-3-14/33

TITLE: The Piezomodulus of Polycrystalline BaTiO₃ as Dependent on Unidirectional Pressure (Zavisimost' p'yezomodulya polikristallicheskogo BaTiO₃ ot odnostoronnego davleniya)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 29, Nr 3, pp.516-520 (USSR)

ABSTRACT: The piezomodulus of barium titanate d₃₃ is connected with the spontaneous polarization P₂ through the equation (Reference 1)

$$d_{33} = \frac{\kappa_1 P_s \epsilon}{\pi} \quad , \quad \text{where} \quad \kappa_1 \approx 2.7 \cdot 10^{-12} \text{ cm}^2/\text{dyn} \quad (\text{Reference 2}).$$

The authors here give the results of the investigation on the dependence of the piezomodulus of a polycrystalline BaTiO₃ on unidirectional pressure, where the piezoelectric polarization was in all experiments caused by an equal constant load. This was attained by applying a certain pressure, e.g. 200 kg/cm² to the sample and then additionally loading

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